

NewsRelease



National Aeronautics and
Space Administration

Langley Research Center
Hampton, Virginia 23681-0001

Kimberly W. Land
(757) 864-9885

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The World's Most Adaptable High-Power Laser

An industry-university consortium have built and brought into operation the world's most versatile high-power laser. This free-electron laser, or FEL, produces well over a kilowatt of laser light: a million times more than the laser in a CD player. The light's color can be precisely selected, a crucial feature for making light perform useful work.

Dr. H. Fred Dylla, free-electron program manager at Jefferson Laboratory in Newport News, Va., will present "The Free-Electron Laser: From Laboratory to Marketplace" at a colloquium at 2 p.m. Tuesday, Sept. 14, at NASA Langley's H.J.E Reid Conference Center.

Media briefing

A media briefing will be held at 1:15 p.m. in the Wythe Room of the Reid Conference Center, 14 Langley Blvd. at NASA Langley. Media who wish to attend the briefing should contact Bob Allen at (757) 864-6176.

Dylla will talk about how this record-breaking power stems from combining FEL hardware with the high-power electron-beam technology used at Jefferson Lab to study the atom's nucleus. Initial experiments with the new laser's light show that high-power FELs will have many uses in basic research, defense, and manufacturing. Experimenters investigated making plastics more durable, making metals more corrosion-resistant, and "micromachining" materials for NASA's Solar Sail project.

Dylla joined Jefferson Lab in 1990 to help plan and lead the free-electron laser project. He also oversees Jefferson Lab's other efforts to transfer newly developed technology to industry. In 1975 he earned a Ph.D. in physics, at the Massachusetts Institute of Technology. Later he worked on fusion energy research at Princeton University's Plasma Physics Laboratory.

The general public is invited to the Sigma Series lecture at the Virginia Air and Space Center that evening, at 7:30 p.m.

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